of our first responders can communicate with each other at the scene of an emergency. It is why I introduced legislation last year that would give our first responders an interoperable emergency communications system coordinated under Federal leadership. I am pleased that the bill provides funds to improve interoperable emergency communications and gives the National Telecommunications and Information Administration, NTIA, greater direction regarding how to distribute these funds.

This bill also contains a provision offered by Senator STEVENS and me which will provide immediate and critical funding to help upgrade and improve our Nation's 9–1–1 call centers. This funding will help ensure that 9–1–1 call centers can be an effective part of an emergency response plan and will make certain they have the technological upgrades to handle and process all the emergency calls that come into them so that our first responders know where to go and what situation they are walking into.

Nearly 5 years ago, America suffered a brutal terrorist attack that stole nearly 3,000 lives and changed America forever. What was required here in Washington was leadership. Leadership to inspire Americans to meet the threat head on. Leadership to mobilize our resources and respond effectively. Leadership to keep our country safe in a new and more dangerous world.

Sadly, the Bush administration failed to match the urgency and resolve of the American people in this great struggle to secure our homeland. Today, with passage of this important legislation, we will demonstrate the leadership that we have been sorely missing for too long in the fight to safeguard our Nation and its citizens.

VOTE EXPLANATION

Mr. BROWNBACK. Mr. President, I regret that on March 9, I was unable to vote on certain provisions of S. 4, the Improving America's Security Act of 2007. I wish to address these votes so that the people of the great State of Kansas who elected me to serve them as United States Senator may know my position.

Regarding vote No. 68, on the motion to invoke cloture on the Cornyn amendment No. 312, as modified, I would have voted to invoke cloture on this amendment. My vote would not have altered the result of this motion.

Regarding vote No. 69, on the motion to invoke cloture on the Reid amendment No. 275, as amended, I would not have voted to invoke cloture on this amendment. My vote would not have altered the result of this motion.

TESTIMONY OF DR. ROBERT SOCOLOW

Mr. BAUCUS. Mr. President, on Tuesday, February 27, 2007, the Finance Committee held a hearing on energy-tax issues titled: America's Energy Future: Bold Ideas, Practical Solutions. I ask unanimous consent that the following testimony from that hearing be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

THE CHALLENGE OF MANAGING U.S. COAL IN A CLIMATE-CONSTRAINED WORLD

TESTIMONY BEFORE THE SENATE FINANCE COMMITTEE

(Professor Robert Socolow, Princeton University, Feb. 27, 2007)

Mr. Chairman, Senator Grassley, and members of the Committee: Thank you for inviting me to testify today. I am pleased to be here in my capacity as co-director of Princeton University's Carbon Mitigation Initiative; as a Professor of Mechanical and Aerospace Engineering at Princeton; and as an individual concerned about the future of U.S. and global energy policy. I commend you for these hearings.

In 2004 Stephen Pacala and I published a paper in Science magazine called ''Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies.'' We argued for a portfolio of climate-change mitigation strategies. Among these strategies are the deepening of energy efficiency in buildings, transport, and industry; the deployment of renewable energy, nuclear power and biofuels; and the capture and sequestration of carbon dioxide produced at coal power plants and coal-to-liquids plants.

Today, I will focus my testimony on the strategy that has moved to near the top of the list from the perspective of urgency: carbon capture and sequestration, or CCS for short.

COLLISION AVOIDANCE

Mr. Chairman, this really is a time of Bad News and Good News. The Bad News is that two trains are on a collision course. The Good News is that there is still time to switch one of the trains onto a different track.

Train Number One is the rush to coal power in the U.S., a consequence of changed expectations about the future natural gas price. Train Number Two is the urgency of dealing with climate change. In my view, none too soon, climate change is high on the agenda for U.S. policy.

A collision is imminent because burning coal as we have burned it in the past sends more carbon dioxide into the atmosphere for each unit of useful energy produced than any other energy source. So, the rush to coal makes the already difficult challenge of climate change even more challenging.

The switch is carbon dioxide capture and sequestration, or CCS. Using CCS, when coal is burned its carbon does not end up in the atmosphere.

READINESS

CCS is commercially mature; it uses proven technologies in new combinations. Carbon dioxide has long been captured at natural gas power plants and coal power plants for use by the food industry. A 500-mile carbon dioxide pipeline built 20 years ago has brought carbon dioxide from across New Mexico from southwest Colorado to oil fields in west Texas. There are no technological reasons to delay full-scale deployment of CCS.

The best evidence I know for the readiness of CCS for full-scale deployment is the 500-megawatt CCS project at BP's Carson refinery, near Long Beach, California. This project of BP and Edison Mission Group received investment tax credits under Section 48B of the tax code, per the 2005 Energy Policy Act. The project will gasify 4500 tons per day of petcoke, the bottom of the barrel at a refinery, a negative-cost fuel. Four million tons of carbon dioxide will be sent off-site each year for enhanced oil recovery (EOR).

Carbon dioxide capture and sequestration is likely to become a favorable economic strategy for a coal utility at a price of about $30 per U.S. ton of carbon dioxide. Prices on emissions in the same range should also enable other ''upstream'' carbon-saving strategies, ending flaring at the oil field and bringing new investments at oil refineries. Carbon dioxide policy should reach far upstream, because the low-hanging fruit is upstream.

Efficiency in energy use is where the other low-hanging fruit are to be found. A low-tech air-conditioner cooling a poorly designed and poorly instrumented office building is as out of place in a climate-constrained world as a coal plant without carbon dioxide capture and sequestration.

EOR AND NATIONAL ENERGY SECURITY

Carbon dioxide is the mischief molecule in the atmosphere, but the miracle molecule below ground. Used for enhanced oil recovery (EOR), carbon dioxide injects new life into old oil fields. Quantitatively, a new one-thousand-megawatt coal plant will produce about six million tons per year of carbon dioxide. If captured and used for enhanced oil recovery, this carbon dioxide should increase oil production at mature fields by between 30,000 and 80,000 barrels a day. Any carbon dioxide heading for the sky is domestic oil not produced—and more imported oil.

NO CTL WITHOUT CCS

Your committee is considering subsidizing synthetic fuel from domestic coal. From a climate change perspective, unless synfuels production is accompanied by carbon dioxide capture and sequestration, this is a big step backward. Burning coal-based synthetic fuel in a car engine, instead of burning gasoline made from crude oil, sends approximately twice as much carbon dioxide to the atmosphere when driving the same distance—unless CCS is incorporated into the synfuels production process, in which case CTL fuel is no worse for climate than petroleum fuel.

''No CTL without CCS'' isn't the world's most exciting bumper sticker, but it carries a vitally important message.

CARBON PRICE, PLUS

Mr. Chairman, The sulfur trading you helped launch in the early 1990s has been a spectacular success and the template for every cap-and-trade proposal since then. But the launching of CCS will require ''a carbon dioxide trading system, plus.'' I strongly recommend that your committee restrict the next investment tax credits only to coal power plants and coal synfuels plants that capture and sequester carbon dioxide.

Moreover, I recommend that policies specify only that carbon dioxide must be sequestered, with penalties for failure, but then leave it to the market to choose the specific capture and sequestration strategy for each circumstance.

POLICY MUST DISTINGUISH INDUSTRIAL FROM NATURAL CARBON DIOXIDE

Several federal and state energy policies in the 1980s that subsidized enhanced oil recovery resulted in the extraction of carbon dioxide from large geological formations—carbon dioxide that otherwise would have stayed below ground for millions of years. This adverse impact on climate was inadvertent; but now we know better. All legislation henceforth must distinguish industrial carbon dioxide from natural carbon dioxide.

POLICIES THAT PENALIZE EARLY BAD ACTION

Urgently needed for the current period are policies that give clear and persuasive signals that any new coal plants without CCS